# *SWE 501 Introduction to Object Oriented Programming*

## *Fall 2017*

## Instructor: Fikret Gurgen

### Class hours: Mon 19:00-21:50 (two blocks)

Off Hours: Before class

Off: ETA 22

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## Assistant: *-.*

***Objectives:***

*Programming methodology: Specification, design, coding, program correctness. Review of data types: scalar types, structured types. Data Structures: Linear structures (stacks, queues, linear lists), nonlinear structures (trees, sets), files (sequential, random access). Implementation of data structures: Linked list implementation, multidimensional array implementation, record implementation, character string, stack, queue, tree and set implementations. Recursion.*

**Text Book:**

## Nell Dale, C++ Plus Data Structures, Fifth Edition, 2016 or recent edition.

**Reference:**

**How to program C++, Deitel & Deitel, recent edition.**

**Other Data Str. In C++ Texts (see instructor)**

**Prerequisites by topic**

1. Programming experience in C language.

**Tentative Topics:**

* C++ as a better C (notes will be provided)
* Introduction to Software Engineering
* Data Design and Implementation
* ADT's Unordered List and Sorted Lists
* ADT's Stack and Queue
* Linked Structures
* Linked Structures Plus
* Programming with Recursion
* Binary Trees

***Note:*** These topics are orderly covered by the course textbook from Chapter 1 to Chapter 8-9 (included).

**Computer usage**

1. Computer projects and homeworks are assigned covering topics above.

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| Prepared by Fikret Gürgen | Date 11/09/2017 |

**Basics for course evaluation :**

2 Midterm exams 45% (22.5%)

Project grade 25% *(quizzes and hmw s are included)*

Final exam 30%

Total 100%

Exam dates:

Midterm 1 (November)

Midterm 2 (December)

Final (January)

* *Exact exam dates will be announced.*

**Important rules:**

For **Make up exam**, 2/3 attendence and submission of all projects and homeworks are required!